STATE OF CALIFORNIA
**STANDARD AGREEMENT**
STD 213 A(New 02/98)

SFUND RECORDS CTR
**2146686**

"FULLY EXECUTED"

| AGREEMENT NUMBER | AMENDMENT NUMBER |
|---|---|
| 99-T1869 | 3 |
| REGISTRATION NUMBER | |

1. This Agreement is entered into between the State Agency and the Contractor named below

STATE AGENCY'S NAME
Department of Toxic Substances Control

CONTRACTOR'S NAME
U.S. Environmental Protection Agency (Superfund)

2. The term of this Agreement is: November 07, 2000 through June 30, 2008

3. The maximum amount of this Agreement is: $661,616.00
Increase dollar amount by $472,000.00 (dollars rounded)

4. The parties agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:

Increase dollar amount by $472,000.00 from an amended amount not to exceed $189,616.00 to a further amended amount not to exceed $661,616.00.
Extend termination date from September 30, 2005 to June 30, 2008. Both parties were in constant communication to resolve complex issues prior to expiration, however, it was not resolved timely as expected.
Add revised Statement of Work, Appendix A, Appendix, C and Appendix D and by these references made a part hereof.

All other terms and conditions shall remain the same.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

**CONTRACTOR**

CONTRACTOR'S NAME *(If other than an individual, state whether a corporation, partnership, etc.)*
U.S. Environmental Protection Agency (Superfund)

BY *(Authorized Signature)*: See attached for official signature.
DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING
Elizabeth Adams Chief

ADDRESS Superfund Division
75 Hawthorne Street, SFD-1
San Francisco, CA 94105

**STATE OF CALIFORNIA**

AGENCY NAME
Department of Toxic Substances Control

BY *(Authorized Signature)*: See attached for official signature.
DATE SIGNED (Do not type)

PRINTED NAME AND TITLE OF PERSON SIGNING
Sandra Poindexter Chief, Contracts and Business Management Branch

ADDRESS
P.O. Box 806
Sacramento, CA 95812-0806

CALIFORNIA
**Department of General Services**
Use Only

DPR

APPROVED
MAY - 8 2006
DEPT OF GENERAL SERVICES

☐ Exempt Per_____

In witness whereof, the parties hereto have executed this contract amendment.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Gov Elizabeth Adams, Chief
Superfund Site Cleanup Branch
US Environmental Protection Agency, Region IX

STATE OF CALIFORNIA

Maureen Gorsen, Director
Department of Toxic Substances Control
California Environmental Protection Agency

Sandra Poindexter, Chief
Contracts and Business Management Branch
Department of Toxic Substances Control
California Environmental Protection

# THIRD AMENDMENT TO THE STATE SUPERFUND CONTRACT

## SURFACE WATER-SEDIMENT OPERABLE UNIT at the McCORMICK & BAXTER SUPERFUND SITE

The United States Environmental Protection Agency ("EPA") and the California Department of Toxic Substances Control ("DTSC") hereby enter into this Third Amendment to the State Superfund Contract for the McCormick & Baxter Superfund Site (the "Third Amendment") amending the State Superfund Contract, State Contract #99-T11869, as previously amended by the First Amendment to the State Superfund Contract for the McCormick & Baxter Superfund Site - State Superfund Contract #99-T1869 A-1 and the Second Amendment to the State Superfund Contract for the McCormick & Baxter Superfund Site - State Superfund Contract #99-T1869 A-2 (as so amended, the "Contract"). Appendix A, of the Contract has been replaced with a Revised Statement of Work ("SOW"), which is attached and made a part hereof. The site-specific SOW specifies changes to the tasks to be performed for this Remedial Action and includes revised projected costs. Appendix C of the Contract has been replaced with a Revised Operation and Maintenance Plan ("O&M Plan") which is attached and made a part hereof. The site-specific O&M Plan provides a general description of the O&M activities to be conducted, the milestones for State assumption of O&M responsibilities, and the criteria that will be used to determine that the remedy is Operational and Functional. The Explanation of Significant Differences dated September 27, 2005 is attached hereto as Appendix D.

I. Section 4, first paragraph, in the State Superfund Contract is replaced with the following:

> This Contract shall become effective upon execution by EPA and the State, and approval by the California Department of General Services, and shall remain in effect until the parties determine that the Remedial Action as described in the SOW is complete or that the final reconciliation of the Remedial Action costs has been satisfied, whichever is longer, but not longer than September 30, 2008; notwithstanding the foregoing, operation and maintenance assurance required by Section 104(c)(3)(A) of CERCLA, as set forth in Paragraph 23 hereof, shall remain in effect for the expected life of such actions. EPA and the State may extend the duration of this Contract by amendment pursuant to Paragraph 31 below if additional time is needed to complete the Remedial Action, close out the Remedial Action, or reconcile costs.

II. Section 5.B in the State Superfund Contract is replaced with the following:

The State's designated State Remedial Project Manager ("SRPM") for this Contract is:

Sam V. Martinez, Jr.
8800 Cal Center Drive, Suite 3
Sacramento, California 95826-3200
Telephone: (916) 255-6583
Facsimile: (916) 255-3696

The State may change its designated SRPM by letter to the EPA signatories without amending this Contract. Such notice shall be deemed to incorporate such change into this Contract.

III. Section 9, first sentence, in the State Superfund Contract is replaced with the following:

The anticipated date for awarding the contract for the second and final phase of Remedial Action work for the Surface Water-Sediment Operable Unit at the Site is March 2006.

IV. Section 14 in the State Superfund Contract, the following Multi-Site Cooperative Agreement is added:

| Type of Agreement | Signatories | Date |
|---|---|---|
| V-00940410-0 | DTSC and EPA | July 2005 – June 2006 |

V. Section 16.A, first paragraph, in the State Superfund Contract is replaced with the following:

The projected cost of the construction for Phase II of the Remedial Action ("Construction Costs") excluding EPA's indirect and intramural costs is Four Million, One-Hundred Fourteen Thousand, Three-Hundred Seventy-Nine Dollars ($4,114,379.00). In addition, the projected cost of the relocation ("Relocation Costs") is $600,000. The projection of Construction Costs is derived from the ROD, ESD and design specifications, and includes contingencies for change orders and construction management services. The projection of Relocation Costs is derived from the ESD. Based on the foregoing, the State's cost share of Construction Costs for Phase II are projected to be Four-Hundred Eleven Thousand, Four-Hundred

Thirty-Eight Dollars ($411,438.00). The state's cost share of Relocation Costs is limited to Sixty-Thousand Dollars ($60,000.00). Within six (6) months following the date on which the EPA has provided written notice to the State that EPA has accepted the completed construction activities for the Remedial Action from the construction contractor pursuant to Paragraph 24.D, EPA shall submit to the State an updated projection of the cost of the operation and maintenance of the Remedial Action.

VI. Section 16.B.i. in the State Superfund Contract is replaced with the following:

On or before February 28 of each year of this Contract, EPA shall submit to the State an invoice for the State's ten percent (10%) cost share for such portion of the work identified in the SOW as was completed during the applicable billing period.

The invoice shall be submitted in duplicate (original plus one copy) to the following, with a copy also to the SRPM identified in paragraph 5.B.:

Chief of Contracts and Office Services
California Department of Toxic Substances Control
P.O. Box 806,
*Sacramento California 95812-0806.*

Each invoice shall be accompanied by a cost summary which indicates the name of the site, the billing period, the general contractor that performed the work during such billing period, the identification number assigned to the general contractor, and the total costs incurred during the period for which EPA is billing the State ("Cost Summary"). EPA shall also provide, as available, invoices and supporting documentation which are furnished to EPA by the contracting agent and prime contractor performing the work described in the SOW ("Contractor Documentation"). The EPA RPM may furnish the Contractor Documentation to the State RPM during the course of the project, and if so, EPA shall be deemed to have satisfied its obligations under this Paragraph. The Cost Summary and Contractor Documentation hereinafter shall be referred to collectively as the "Cost Documentation." The State shall pay the amount requested by such invoice within sixty (60) days following actual receipt thereof, provided, that if the State receives such invoice prior to February 28, the State shall pay the amount requested by such invoice on or before April 30. The State assures payment of its cost share obligation for actual Remedial Action costs at the Site, which shall be settled at reconciliation pursuant to Paragraph 32 below, and which shall not exceed Four-Hundred Eleven Thousand, Four-Hundred Thirty-Eight Dollars ($411,438.00) for the Phase II

construction and Sixty-Thousand Dollars ($60,000.00) for the relocation. The State acknowledges that such assurance may require the State to seek additional appropriations to cover the work outlined in the SOW; provided, however, that the State's cost share obligation may only be increased above the projection cost set forth in Paragraph 16(a) by an amendment to this Contract. The State shall use its best efforts to obtain authorization of funds necessary to meet its assurance to pay its cost share obligation for actual costs of the remedial action at the Site in accordance with State law; notwithstanding the foregoing, nothing contained herein shall be interpreted as a commitment to appropriate, obligate or pay funds in contravention of State law.

Except as amended by this Third Amendment, the provisions of the Contract remain in full force and effect.

This Third Amendment shall take effect upon the date when this Third Amendment is fully executed by the parties.

This Third Amendment may be executed in counterparts.

**McCORMICK & BAXTER SUPERFUND SITE**
Stockton, California
Surface Water-Sediment Operable Unit
**REVISED STATEMENT OF WORK**
FOR
STATE SUPERFUND CONTRACT AMENDMENT #3

## 1.0 INTRODUCTION

This statement of work describes Remedial Action ("RA") activities to be accomplished for the Surface Water-Sediment Operable Unit ("O.U.") at the McCormick and Baxter Superfund Site (the "Site" or the "M&B Site") on behalf of the United States Environmental Protection Agency, Region IX ("EPA"), under this State Superfund Contract Amendment. The activities are derived from the Record of Decision ("ROD") dated March 31, 1999, and the Explanation of Significant Differences ("ESD") dated September 27, 2005.

## 2.0 BACKGROUND

### 2.1 SITE LOCATION AND DESCRIPTION

McCormick & Baxter Creosoting Company
1214 West Washington Street
Stockton, California
EPA ID # CAD0099106527

The McCormick and Baxter Creosoting Company operated a wood treating company at the Site from 1946 until 1991, when the company ceased operations.

Various wood preservation processes were used at the M&B Site during its operational history. Chemical preservatives used at the Site contained creosote, pentachlorophenol ("PCP"), arsenic, chromium, copper and zinc. Solvents or carriers for these preservatives reportedly included petroleum-based fuels such as fuel oil kerosene and diesel; butane; and ether.

Most treatment processes used at the Site consisted of pressure impregnation of the preservative solutions in retorts located in the central portion of the Site. Pressure treated wood was removed from the retorts and allowed to dry in storage areas throughout the Site. For a brief period of time, pole ends were also dipped in an oil-PCP mixture at the butt tank area, located south of the main processing area. Waste preservative was stored

in oily waste ponds in the northwestern portion of the Site adjacent to Old Mormon Slough ("Slough") from 1942 until 1981.

Site drainage was uncontrolled until 1978. Stormwater from all areas of the M&B Site discharged directly into Old Mormon Slough (from the early 1940's until approximately 1976) and from a portion of the M&B Site into New Mormon Slough.

## 2.2 SITE CONTAMINATION

The chemicals of concern ("COCs") identified for the M&B Site are PCP, carcinogenic polynuclear aromatic hydrocarbons ("cPAHs"), arsenic, dioxins/furans and naphthalene. Dioxins/furans are believed to have originated as manufacturing impurities contained in the PCP solutions. Although relatively non-toxic, naphthalene is included as a COC because it is widely distributed throughout soil and groundwater at the Site in relatively high concentrations and it serves as an indicator for the presence of non-carcinogenic PAHs ("ncPAHs").

In general, the highest concentrations of COCs in Site soils are present in the western portion of the Site, mainly the former main processing area, the Cellon processing area, the oily waste pond area and the track pit. In the eastern portion of the Site, which was used for storage of treated and untreated wood, COCs are present at lower concentrations and are primarily found in shallow soils.

Groundwater contamination at the Site is limited to semi-volatile organic compounds ("SVOCs"), including PAHs and PCP, and, to a lesser extent, dioxin. Groundwater contamination above maximum contaminant levels ("MCLs") has not been detected beyond the Site fenceline. However, naphthalene, for which there is no MCL, has been detected beyond the Site fenceline at levels exceeding its Region 9 Preliminary Remediation Goal ("PRG").

Sediment contamination related to the M&B Site appears to be limited to Old Mormon Slough, which is located directly adjacent to the M&B facility. The primary COCs identified in sediments are PAHs and dioxin; PCP was not widely distributed in sediment. Concentrations of cPAHs, ncPAHs and dioxin were elevated in Old Mormon Slough sediments relative to a Stockton Channel reference location and a Site-specific cleanup level based on ecological risk. Sediment contamination appears to be generally limited to 8 feet below the mudline.

## 2.3 SURFACE WATER-SEDIMENT O.U.

Remedial goals for the Surface Water-Sediment O.U. are to reduce potential risks to human health from the consumption of fish contaminated with Site-related COCs; to prevent humans and aquatic organisms from direct contact with sediment having contaminants in excess of risk-based concentrations or that have been shown to be toxic to aquatic organisms; to prevent or minimize the migration of contaminants from Old Mormon Slough sediments into the surface water column; and to prevent or minimize the migration of contaminants from Old Mormon Slough sediments to groundwater.

EPA set the following cleanup standards for sediment at the M&B Site: 21 ng/kg for dioxin and 333 mg/kg for total PAHs.

## 2.4 SITE WORK PREVIOUSLY PERFORMED

EPA conducted several phases of removal actions to stabilize Site conditions, improve Site security, and demolish and dispose of above-ground structures and equipment. EPA addressed contaminant releases into Old Mormon Slough by installing a sheet piling wall along the southwestern shoreline of Old Mormon Slough to control oily seepages from the former oily waste ponds area. EPA also excavated approximately 12,000 cubic yards (cy) of contaminated soil from the pond area and contained the excavated soil in a lined repository in the central portion of the Site. EPA then covered the central processing area with an asphalt cap.

# 3.0 RA WORK

The initial State Superfund Contract was for RA construction activities related to the Surface Water-Sediment O.U., in addition to construction management and support services. State Superfund Contract Amendment 3 adds relocation as a component of the RA. This Statement of Work updates the RA tasks and costs, including relocation.

Construction activities are separated into two phases: Phase I (bank stabilization) and Phase II (sediment capping). Phase I has been completed. Phase II has two primary tasks, construction and relocation. The cost table has been revised to show the current costs for Phase II construction and relocation.

## 3.1 RA WORK COMPLETED

Phase I activities have been completed. These activities included site preparation and bank protection actions that were needed to address potentially contaminated bank

material on the McCormick & Baxter property. If not removed, this material could slump into the Slough and potentially recontaminate the cap at levels exceeding the sediment cleanup levels listed above. Changes to the initial design included: 1) expanded Site preparation actions to remove concrete debris, vegetation and soil from a larger portion of the bank, and 2) expanded bank preparation actions, including building up a two-foot berm along the bank with clean material to prevent runoff into the Slough.

Phase I construction was completed between October 2002 and February 2003. The completion of Phase I work is documented in *Project Quality Control Summary Report: Phase I - Bank Stabilization, McCormick & Baxter Superfund Site* (April 2003).

## 3.2 RA WORK TO BE PERFORMED

Phase II includes capping of contaminated materials in Old Mormon Slough and installation of permanent physical access barriers. This phase is expected to take place from July 2006 to January 2007.

The costs for Phase II activities are based on the assumption that cap material will be brought to the Site by barge. The preferred source of cap material is borrow material from the U.S. Army Corps of Engineers Rio Vista Dredge Disposal Site. This material has been pre-tested and is acceptable for this project.

The cost includes one year of post-construction activities.

## 3.3 RELOCATION

Issues regarding the relocation of an individual living on a barge in Old Mormon Slough arose during the design phase of implementing the sediment remedy. Resolution of this issue resulted in changes to the remedy and prompted EPA to issue an ESD.

Phase II of the sediment remedy was originally scheduled to begin in July 2003. However, the work had to be delayed until the barge and two other vessels could be permanently moved from the slough. Permanent removal is necessary in order to ensure that the cap, once constructed, will not be damaged by the continued presence of the vessels.

As described in the ESD, relocation was added to the sediment remedy in order to implement Phase II. The costs includes $50,000 for the purchase of the barge and $550,000 for the purchase of replacement housing for the owner, temporary storage of personal property, and moving expenses.

## 4.0 OPERATION AND MAINTENANCE PLAN

The O&M Plan for the Surface Water-Sediment O.U. is provided as Attachment C. The O&M Plan describes the O&M activities to be conducted, lists the milestones for State assumption of O&M responsibilities, and provides the performance criteria that will be used to determine that the remedy is Operational & Functional ("O&F"). The O&M Plan will be updated to include information on the maintenance, if required, of institutional controls, once the institutional controls have been agreed upon by EPA and the State.

Major Tasks

**Phase II - Sediment Capping**

Remedial Action Management Plan
- Work Plans
- Sampling and Analysis Plan

Mobilization/Demobilization
Site Preparation
- Maintenance of haul road and stockpile area
- Clear channel debris

Temporary Silt Curtains
Borrow Source Preparation
Cap Placement
Water Quality Sampling
Laboratory Analysis
Construction Bathymetric Surveys
Permanent Fence
Permanent Log Boom
Project Closeout Report
USACE Oversight
One-Year O&M
Log Boom/Sign Maintenance
Sampling and Analysis
Bathymetric Survey
O&M Manual
USACE Oversight

**Relocation**

Purchase of barge, *The Merit*
Balance toward purchase of replacement housing
Potential temporary storage of personal property
Moving expenses

**Costs by Phase**

| | | |
|---|---|---|
| **Phase II - Sediment Cap:** | | |
| Remedial Action Management Plan | $ | 31,080 |
| Site Mobilization/Demobilization | | 389,324 |
| Haul Road/Stockpile Area | | 8,022 |
| Temporary Silt Curtains | | 118,210 |
| Install Emergency Silt Curtain | | 37,330 |
| Clear Inner Channel Debris | | 39,584 |
| Borrow Source Preparation | | 44,439 |
| Sediment Cap | | 2,114,719 |
| Sediment Cap over 36,400 cy | | 222,006 |
| Permanent Log Boom | | 36,062 |
| Chain Link Fence | | 65,022 |
| Project Closeout Report | | 107,354 |
| Water Quality Sampling (Regime 1) | | 39,728 |
| Water Quality Sampling (Regime 2) | | 45,925 |
| All Other Base Work (Air Monitoring; Dust Control, Engineering Support; Bathymetry Survey, Navigational Controls, Permanent Markers, Project Management/Field Oversight) | | 586,629 |
| Total USACE 1-Year O&M (O&M Manual, Log Boom Maint., Sampling) | | 43,912 |
| Subtotal | | 3,929,346 |
| USACE S&A + EDC | | 185,033 |
| **Phase II Total** | **$** | **4,114,379** |
| **Relocation Total** | | |
| Purchase of barge | $ | 50,000 |
| Estimated cost of purchasing replacement housing, temporary storage of personal property, and moving expenses. | | 550,000 |
| **Relocation Total** | **$** | **600,000** |
| **PHASE II (Sediment Cap and Relocation) TOTAL** | **$** | **4,714,379** |
| **STATE SHARE** | **$** | **471,438** |

# Operation and Maintenance (O&M) Plan
# for
# Surface Water-Sediment Operable Unit

McCormick & Baxter Superfund Site
Stockton, California

January 2006 (Revised)

Table of Contents

## 1.0 Purpose of O&M Plan

The purpose of this Operation and Maintenance (O&M) Plan for the McCormick & Baxter Superfund Site (M&B) sediment remedy is primarily for use as an administrative document to provide a general description of the O&M activities to be conducted, outline the milestones for State assumption of O&M responsibilities, and provide the criteria that will be used to determine that the remedy is Operational and Functional (O&F).

The O&M Manual, on the other hand, is primarily a technical submittal and will include a detailed description of the O&M components, schedule, personnel requirements, laboratory testing requirements, and reporting requirements, among other topics. The O&M Manual will be completed after construction has been concluded. Both documents will be prepared according to the EPA guidance, "Operation and Maintenance in the Superfund Program" (EPA-540-F-01-004, May 2001).

## 2.0 Site Background Information

The M&B Site is located in an industrial area of Stockton, California, near the Port of Stockton and the Interstate 5/Highway 4 interchange. The former wood treatment facility borders Old Mormon Slough, which joins the Stockton Deepwater Channel on the San Joaquin River. The McCormick & Baxter Creosoting Company operated at the Site from 1946 to 1990, when the company ceased operations. Wood treatment processes at the Site used creosote, pentachlorophenol (PCP), and compounds containing chromium, copper, zinc and arsenic. As a result of Site operations, soil and groundwater at the Site, as well as in sediment in Old Mormon Slough, became contaminated. The primary contaminants of concern (COCs) in sediment for both human health and ecological receptors are dioxins/furans and polynuclear aromatic hydrocarbons (PAHs).

The M&B Site has been divided into the Soils-Groundwater Operable Unit (O.U.) and the Surface Water-Sediment O.U. The EPA Record of Decision (ROD), dated March 31, 1999, selected placement of an approximately two- foot thick sand cap in Old Mormon Slough as the remedy for contaminated sediment. The cap design addresses effective short- and long-term chemical isolation of contaminants, including possible effects of bioturbation, consolidation, erosion and other pertinent processes. Cap material will consist of clean borrow material and will be required to meet stringent acceptance criteria before placement. The cap will cover approximately 8.8 acres. The selected remedy includes the use of physical access controls and institutional controls to protect the cap. Physical access restrictions consist of a log boom and signs placed across the Slough to prevent boat traffic from potentially disturbing the cap. The need for institutional controls, such as governmental and proprietary controls to protect the sediment remedy, will be determined by EPA and the State. RA will be conducted by the U.S. Army Corps of Engineers (USACE) through an interagency agreement (IAG) with EPA.

EPA and California EPA/Department of Toxic Substances Control (DTSC) signed a State Superfund Contract (SSC) (dated September 8, 1999, as amended on November 7, 2000 and October 18, 2002) to document the responsibilities of EPA, as the lead agency, and DTSC, as the support agency, during the Remedial Action (RA) and O&M for the Surface Water-Sediment O.U., as selected in the ROD. As stated in the SSC, "...EPA shall conduct activities necessary to ensure that the Remedial Action is operational and functional for a period of up to one year after construction is complete, or until EPA and the State determine that the Remedial Action is functioning properly and performing as designed, whichever is earlier."

## 3.0 Criteria for O&F Determination

Approximately one year after construction of the cap, EPA will conduct a bathymetric survey and collect three mid-channel sediment grab samples for chemical analysis. The following criteria will be used at that time to make a determination that the sediment remedy is O&F:

1) Cutback area and berm along southern bank are stable with no evidence of erosion
2) Grass stands on berm along southern bank are established
3) Sediment cap bathymetry acceptance criteria: Confirm minimum 2 feet over pre-construction survey in capped area of Old Mormon Slough
4) Sediment cap chemistry acceptance criteria: No exceedance of ROD sediment cleanup standards in capped area of Old Mormon Slough (see Table 2 below)
5) Access restrictions (log boom and signs) are in place and preventing boat access into Old Mormon Slough
6) Institutional Controls are in place

## 4.0 Milestones for State Assumption of O&M Responsibilities

**Table 1 - O&M Milestones**

| Milestone | Planned Date |
|---|---|
| EPA/DTSC/USACE/Contractor conduct Prefinal Inspection | November 2006 |
| USACE Contractor prepares Punchlist | November 2006 |
| EPA/DTSC/USACE conduct Final Inspection (optional*) | December 2006 |
| One-year Ashakedown@ period starts (at Final Inspection) | December 2006 |
| Contractor prepares Cost and Performance Report | February 2007 |
| EPA/DTSC make final determination of institutional controls as specified in SSC (required for inclusion in O&M Manual) | No later than April 2007 |
| USACE prepares Draft O&M Manual and 30-Year O&M Cost Projection for EPA and DTSC comment | February 2007 |

| | |
|---|---|
| USACE prepares Final O&M Manual and 30-Year O&M Cost Projection | April 2007 |
| USACE conducts bathymetric survey and sediment sampling | September 2007 |
| USACE prepares Final RA Report | November 2007 |
| EPA and DTSC make O&F determination (EPA letter to DTSC) | December 2007 |

* According to the O&M guidance, "when only minor problems are found, the prefinal inspection may be counted as the final inspection."

## 5.0 Description of O&M Activities

O&M activities for the sediment remedy are expected to include the following:

1) Periodic visual inspection of southern bank of Old Mormon Slough (McCormick & Baxter property) to assess bank and berm for evidence of erosion
2) Periodic visual inspection of condition of southern bank grass stands
3) Periodic collection of sediment cap grab samples for chemical analysis (see Section 6.0)
4) Periodic bathymetric surveys of Old Mormon Slough (see Section 6.0)
5) Periodic visual inspection of log boom and signs in Old Mormon Slough
6) Repair of southern bank and berm as needed
7) Re-seeding of southern bank of Old Mormon Slough as needed
8) Replenishment of sediment cap material as needed
9) Replenishment of sediment cap armoring as needed
10) Repair and/or replacement of access restrictions (log boom and signs) as needed
11) Evaluation of institutional controls, if any, to determine they are in place and functioning

O&M activities and their schedule will be detailed in the O&M Manual. The manual will also provide decision criteria for conducting future actions. For example, in the event that bathymetric data or sediment chemical data indicate the integrity of the cap may be compromised, management actions could include replenishing cap materials or adding more impervious cap materials.

## 6.0 Conceptual O&M Sediment Cap Monitoring Plan

This O&M Plan describes the Conceptual O&M Sediment Cap Monitoring Plan. The O&M Manual will provide the final O&M Sediment Cap Monitoring Plan once comments have been received from other agencies (e.g., the Regional Water Quality Control Board), and DTSC and EPA have reached agreement on the components of the monitoring. Discussions are currently underway with the National Marine Fisheries Service (NMFS) and the U.S. Fish & Wildlife Service on the value of clam and/or crayfish studies as part of the monitoring program.

## 6.1 Objectives of O&M Sediment Cap Monitoring

Monitoring of the cap will be conducted at regular intervals to evaluate the effectiveness of the remedy in protecting human health and the environment. The overall goals of the monitoring program are to:

1) Confirm the structural integrity of the constructed cap (i.e., confirm that the constructed cap is physically stable, remaining in place at the desired thickness and thereby effectively isolating underlying contaminated sediments)
2) Confirm that ecological risk-based cleanup standards have not been exceeded in the surface cap material
3) Confirm that institutional controls and access restrictions are effective in protecting the cap from disturbance

## 6.2 Compounds, Sampling Procedures and Sampling Frequency

The O&M Sediment Cap Monitoring Program will consist of the collection of bathymetric and chemical data from the capped area of Old Mormon Slough as follows:

**Table 2 - O&M Cap Monitoring**

| Compound or Attribute | Measurement or ROD Cleanup Standard | Method | Sampling Frequency* |
|---|---|---|---|
| Depth Soundings | Confirm minimum 2 ft. over preconstruction survey | Field | Year 5, 10, 20, 30 |
| 2,3,7,8-tetrachoro-p-dibenzodioxin (2,3,7,8-TCDD) - 3 samples | 21 ng/kg | 1613B or equivalent | Year 5, 10, 20, 30 |
| PAH, Organic Carbon Basis - 3 samples | 333.3 mg/kg | 8270c or equivalent | Year 5, 10, 20, 30 |
| Total Organic Carbon (3 samples) | Not Applicable (needed for PAH calculation) | 9060 modified (or equivalent) | Year 5, 10, 20, 30 |

* Years following the determination of O&F

The sediment grab samples will be collected from three locations in mid-channel. The sampling is scheduled to coincide initially with the EPA Five Year Review process and provide the data for those evaluations. If necessary, cap monitoring may be done more frequently as described under the O&M Contingency Plan.

## 7.0 FSP/QAPP and HSP

Field Sampling Plans/Quality Assurance Project Plans (FSP/QAPP) prepared by USACE and its contractor(s) for RA activities will be relevant to O&M activities and can be readily adapted by the DTSC O&M contractor. This also applies to the Health and Safety Plans (HSP) prepared by USACE and its contractors for Site Maintenance, RD and RA activities. The O&M Manual will discuss health and safety issues relevant to O&M activities.

## 8.0 Institutional Controls

As stated in the SSC, "EPA and the State shall determine the institutional controls necessary to implement the Remedial Action within six months following completion of construction of the Remedial Action." If institutional controls are determined to be necessary by EPA and DTSC for protection of the sediment cap, O&M activities related to their maintenance and enforcement will be included in the O&M Manual.

## 9.0 O&M Personnel Requirements

The general personnel requirements for O&M activities will be for slough bank inspections; log boom inspections; bathymetric surveys; sediment grab sample collection and analysis; and data management and reporting. The O&M Manual will provide specific information on O&M staffing needs, including training and certification requirements.

## 10.0 O&M Equipment and Material Requirements

There are no major equipment and material requirements for O&M for this remedy. Incidental equipment and material will be described in the O&M Manual.

## 11.0 O&M Contingency Plan

The O&M Manual will provide a Contingency Plan for handling abnormal occurrences. For example, the Contingency Plan will recommend activities, such as additional bathymetric surveys outside of the normal schedule, in the event of a major seismic event or flood in the Stockton area.

## 12.0 O&M Cost Projection

30-Year O&M cost projection will be prepared by the USACE and provided to DTSC once EPA and DTSC have reached agreement on the components of the O&M. The cost projection will be included in the O&M Manual.

## 13.0 Reporting Requirements

DTSC will provide all O&M monitoring data and inspection results to EPA, including any monitoring conducted outside of the normal schedule. A sample report format will be provided in the O&M Manual. EPA will use this data to prepare the Five Year Reviews reports.

## 14.0 Criteria for O&M Completion

The criteria for O&M completion (i.e., conditions for O&M termination) for the sediment remedy have not been established yet by EPA and DTSC. These will be developed at a later date.

## 15.0 Site Use and Disposition of Facilities Following O&M Completion

Because the Soil and Groundwater O.U. remedies are still to be implemented, the final use of the site is unknown. USACE is expected to be responsible for overall Site Maintenance activities (e.g., site security, fence repair, operation of the stormwater collection system) until RD/RA has been completed for the other O.U.s.

## 16.0 Access and Property Issues

As stated in the SSC regarding State site visits during RA, "Insofar as EPA has access to the Site, representatives of the State shall have access to the Site to the same extent as EPA for the purpose of reviewing work in progress, subject to the State's compliance with the Site's safety plan. To the extent feasible, representatives of the State shall coordinate with the RPM prior to visiting the Site." The O&M Manual will outline specific procedures for coordination between the DTSC O&M contractor and the USACE Site Maintenance and Soil-Groundwater O.U. contractors.

APPENDIX D

McCORMICK & BAXTER SUPERFUND SITE
Stockton, California
Surface Water-Sediment Operable Unit

**EXPLANATION OF SIGNIFICANT DIFFERENCES**
FOR
STATE SUPERFUND CONTRACT AMENDMENT #3

Note: This document was published independently by EPA.

**McCormick & Baxter Superfund Site**
**Stockton, California**

# EXPLANATION OF SIGNIFICANT DIFFERENCES
## For Operable Unit #3 - Surface Water/Sediment

## I. Introduction

The purpose of this document is to explain the significant differences between the Record of Decision ("ROD") signed by the U.S. Environmental Protection Agency ("EPA") on March 31, 1999, for the Surface Water/Sediment Operable Unit ("OU") and the remedy for that OU ("sediment remedy") that will be implemented at the McCormick & Baxter Superfund Site ("M&B Site"). Under Section 117 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, ("CERCLA"), 42 U.S.C. § 9617, EPA is required to publish an Explanation of Significant Differences ("ESD") whenever significant change is made to a final remedial action plan. EPA is the lead agency for the M&B Site, and the California Department of Toxic Substances Control ("DTSC") is the support agency representing the state.

This document provides a brief background on the M&B Site, describes the changes to the remedy selected in the ROD that EPA is now making and explains how these changes affect implementation of the remedy selected by EPA in March 1999.

The ROD selected a final soil remedy, a final sediment remedy and an interim groundwater remedy. The selected remedy for the Surface Water-Sediment OU is the placement of a two-foot thick sand cap in Old Mormon Slough ("the slough"). One change to the sediment remedy is the inclusion of a bank stabilization component. During the remedial design process for the sediment remedy, it became apparent that the banks along the slough were eroding into the slough, and if not addressed, could be a source of recontamination after the sediment cap was in place. Because of this, EPA determined that it was necessary to stabilize the banks of the slough wherever contaminated soil was located. A second change is that it became necessary to relocate an individual living on a barge in the slough in order to implement the sediment remedy and to ensure that the cap, once constructed, would not be damaged by the continued presence of the barge. Both of these changes have increased the cost of the remedial action.

This document satisfies the public participation requirements under CERCLA Section 117(c) and the National Contingency Plan ("NCP") Section 300.435(c)(2)(i). It will become part of the Administrative Record file for the M&B Site, as specified in the NCP, 40 C.F.R. Section 300.825(a)(2). The Administrative Record file is available for public review at the following locations:

Stockton Public Library
605 N. El Dorado Street
Stockton, CA 95203
(209) 944-8221

U.S. EPA
Superfund Records Center
95 Hawthorne Street, Suite 403S
San Francisco, CA
(415) 536-2000

II. Site History, Contamination and Selected Remedy

A. Site History

The M&B Site is a former wood treatment facility that occupies 29 acres in a predominantly industrial area near the Port of Stockton. The M&B Site includes the slough, which borders the northern portion of the Site, and connects to the Stockton Deepwater Channel on the San Joaquin River. McCormick & Baxter Creosoting Company operated a wood treating company at the Site from 1946 until 1991, when the company ceased operations. Various wood preservation processes were used at the M&B Site during its operational history. Chemical preservatives used at the M&B Site included creosote, pentachlorophenol ("PCP"), arsenic, chromium, copper and zinc.

Most treatment processes at the M&B Site consisted of pressure impregnation of wood with preservative solutions in retorts (large pressure cylinders) located in the central portion of the M&B Site. Pressure-treated wood was removed from the retorts and allowed to dry in storage areas throughout the M&B Site. Waste preservative was stored in oily waste ponds in the northwestern portion of the M&B Site adjacent to the slough until 1981. Contaminant source areas at the M&B Site developed from the past release of wood-treating chemicals to surface soils, deeper soils and groundwater through past processing operations, spills, chemical handling practices and drippage from treated wood. The sediments in the slough became contaminated as a result of chemical process spills, surface runoff, direct discharge of stormwater through outfalls, and/or subsurface migration from other OUs (e.g., seepages from the former oily waste pond area).

M&B Site drainage was uncontrolled until 1978. Stormwater from all areas of the M&B Site discharged directly into the slough (from the early 1940's until approximately 1976) and from a portion of the M&B Site into New Mormon Slough (from approximately 1970 to 1978), located across the I-5 freeway.

The former processing areas, tank farm and interior roadways of the M&B Site are paved; the rest of the M&B Site surface is unpaved with limited vegetative cover. A layer of gravel between one and three feet thick is found across most of the M&B Site. Railroad tracks are

located on many areas of the M&B Site. Most of the former facility structures have been removed. The office building, two storage sheds and the stormwater collection system lift station are the only remaining above-ground structures. Underground sump-like basement foundations and associated piping for the former pressure treatment units remain in the central portion of the M&B Site.

The slough is approximately 2500 ft. long and 180 ft. wide. Most of the slough is approximately 10 ft. deep, although the western portion near the mouth has historically been dredged for barge access. The slough is tidally influenced, with a maximum tidal range of approximately three feet. Stockton Channel, the Port of Stockton Turning Basin and the entrance to the slough are areas of net sediment deposition, and are periodically dredged to maintain depths appropriate for ship traffic.

The chemicals of concern ("COCs") identified for the M&B Site are PCP, carcinogenic polynuclear aromatic hydrocarbons ("PAHs"), arsenic, dioxins/furans and naphthalene. Dioxins and furans are believed to have originated as manufacturing impurities contained in the PCP solutions. Although relatively non-toxic, naphthalene is included as a COC because it is widely distributed throughout soil and groundwater at the M&B Site in relatively high concentrations and it serves as an indicator for the presence of non-carcinogenic PAHs.

B. Sediment Contamination

Sediment contamination related to the M&B Site appears to be limited to the slough, which is located directly adjacent to the McCormick & Baxter Creosoting Company facility. The primary COCs identified in sediments are PAHs and dioxin. Concentrations of PAHs and dioxin were elevated in the slough sediments relative to the Stockton Channel reference location. Total PAH concentrations in the slough decrease with increasing depth in the western half of the slough, and increase with increasing depth in the eastern half of the slough. The sediment is also contaminated with metals. Fish in the area contain elevated levels of site-related contaminants and pose a risk to human and ecological receptors. Although warning signs are posted in the area and the county has conducted outreach programs to warn residents of the dangers of eating locally-caught fish, subsistence fishermen are known to currently fish in the area of the M&B Site.

EPA divided the slough into four subareas based on the types and depths of contamination found at different parts of the M&B Site (see attached Figure 5b from the ROD): the eastern end ("END"); the area adjacent to the M&B Site central processing area ("CPA"); the area adjacent to the oily waste ponds area ("OWP"); and the mouth of the slough ("MTH").

C. Selected Sediment Remedy

The selected sediment remedy in the ROD is in-place capping of sediment in the slough to isolate contaminated sediment and to prevent exposure to human health and ecological receptors. The cap will consist of a minimum two-foot thick sand layer covering about three-

quarters of the slough (from the OWP area eastward), with armoring where needed to prevent erosion of the cap. The remedy also includes access restrictions (a log boom across the slough and warning signs to prevent disturbance of the cap by boat traffic) and institutional controls to prevent interference with the remedy. Long-term monitoring will ensure the effectiveness of the remedy.

III. Basis for the Document/Description of Significant Differences

The selected sediment remedy is essentially the same, a two-foot thick sand cap. However, as described below, issues regarding bank stabilization and relocation of a resident living on a vessel in the slough arose during the design phase of implementing the sediment remedy. Resolution of these issues has resulted in significant differences to the selected remedy and prompted EPA to issue this ESD.

A. Bank Stabilization

A structural survey of the banks of the slough in March 1999 disclosed the presence of numerous slope failures and visual evidence of soil slumping into the slough. Sampling was performed to determine the potential for the erosion of embankment soils to recontaminate the cap above the ROD sediment cleanup standards.

In June 1999, locations along the southern and northern banks of the slough were sampled for PAHs, PCP and dioxins/furans. The sampling data were compared with "no action" bank stabilization decision criteria, which were calculated to estimate the chemical-specific values below which the cap would not become contaminated by eroding bank material. The results of this investigation were presented in the *Final Design Analysis Report, McCormick & Baxter Superfund Site Surface Water Operable Unit Sediment Cap* (U.S. Army Corps of Engineers, December 2001). The conclusions of the investigation were:

- The bank material on the southern shoreline generally failed the "no action" chemical criteria through multiple exceedances of the loading-based decision thresholds for total PAHs and dioxin. Based on this data, EPA determined that it was necessary to stabilize the southern bank before capping the slough.

- The bank material on the northern shoreline passed the "no action" chemical criteria. Based on this data, EPA does not plan to incorporate the northern bank into remediation.

Based on the results of this evaluation, EPA has proceeded with the sediment remedy by dividing it into two construction phases. Phase I, implementing bank stabilization along the southern shoreline, was completed between October and December, 2002. The stabilization of the southern bank increased the cost of the sediment remedy by approximately $1.8 million, but in turn it improves the long-term protection of the cap once it is in place. As noted earlier,

sampling indicated that the northern shoreline was not contaminated and, even if it eroded into the slough, was not a source of sediment recontamination.

B. Relocation

Phase II of the sediment remedy, placement of the cap, was originally scheduled to begin in July 2003. However, that work cannot proceed until several vessels moored in the slough are removed. One of those vessels is serving as a residence, and EPA determined that the owner/occupant would be relocated, consistent with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act ("URA"), 42 U.S.C. §4601 et seq. For the reasons described in this section, relocation has therefore been added to the sediment remedy in order to implement Phase II.

The vessel, *The Merit*, which is located on the northern shoreline of the slough, must be removed and the owner must move to another location in order for EPA to complete the remedy. The vessel is a 1928 65-foot rectangular scow barge (with a forward rotating crane) that has been fitted with a rectangular steel cabin structure for use as a houseboat. There is also an attached floating repair dock, a container storage raft, and a sailboat that must be removed.

The sediment cap cannot be constructed until the vessels have been permanently moved out of the slough. There is no alternative sediment remedy that would allow the vessels to remain in the slough and be equally protective of human health and the environment while also being equally cost-effective as the selected capping remedy.

It is not possible for EPA to temporarily move the vessels out of the slough and return them after the cap is completed. This is primarily because the bottom of the slough will be two feet higher and propeller wash from moving the vessels, particularly *The Merit*, back into the slough would damage the newly-installed cap. Additionally, two spuds (vertical steel rods) on the barge anchor it into the slough. If *The Merit* was moved back into the slough and the spuds once again dropped into the slough bottom, they would cut through the clean cap material and into the underlying contaminated sediment.

The cost of the relocation is estimated at $600,000. This includes $50,000 for the purchase of the vessel, *The Merit*; $449,000 toward the purchase of replacement housing by the owner of *The Merit*; minor repairs to the property to make it "decent, safe and sanitary" as required by law; potential storage costs for personal property up to 12 months; and moving expenses.

The cost increase for the sediment remedy construction is estimated at $4.1 million above the figure of $1.2 million in the ROD. The cost increase includes $1.8 million for bank stabilization, up to $600,000 for relocation, and the estimated cost of having to delay the completion of Phase II for three years because the vessels in the slough prevented EPA from constructing the cap as originally scheduled. This cost estimate is based on completion of the work in 2006. The total cost for the Phase I and II construction is now estimated at $5.3 million.

IV. Applicable or Relevant and Appropriate Requirements (ARARs)

Remedial actions selected under CERCLA must comply with all Applicable or Relevant and Appropriate Requirements ("ARARs") under federal or state environmental law. EPA did not identify any additional ARARs for the modified sediment remedy, beyond those identified for the selected sediment remedy in the 1999 ROD. However, EPA is complying with the URA and the National Historic Preservation Act ("NHPA"), 16 U.S.C. 470 et seq., with respect to the modified sediment remedy.

The URA is an act to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs and to establish uniform and equitable land acquisition policies. EPA has determined that the URA is not an ARAR for this ESD because it is not an environmental standard. However, EPA has followed the requirements of the URA for the relocation conducted under this ESD.

Pursuant to §§106 and 110(f) of the NHPA, CERCLA remedial actions are required to take into account the effects of remedial activities on any historic properties included on or eligible for inclusion on the National Register of Historic Places. EPA has determined that the NHPA is not an ARAR for this ESD because it is not an environmental standard, but has complied with its requirements. Because the owner of *The Merit* claimed that it was historically significant and eligible for the national register, EPA conducted an historical evaluation of the vessel. The findings of the evaluation were that *The Merit* was not eligible for the National Register of Historic Places because it had been significantly altered from its original condition. The findings are presented in the *National Register of Historic Places Eligibility Evaluation of a Former 1928 Oil Screw River Scow* (Macfarlane Archaeological Consultants, April 4, 2004). EPA complied with the requirements of NHPA by completing a consultation with the California State Historical Preservation Officer (SHPO).

V. Support Agency Comments

The California Department of Toxic Substances Control has concurred on this ESD for Operable Unit #3.

VI. Statutory Determinations

The modified remedy satisfies CERCLA Section 121. EPA and DTSC believe that the remedy remains protective of human health and the environment, complies with federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective.

VII. Public Participation Compliance

The public participation requirements set out in NCP Section 300.435(c)(2)(i) will be met.

Since the issuance of the ROD, EPA has sent out four fact sheets to update the public about progress on the remedies for each OU. A July 1999 fact sheet notified the public that the ROD had been signed and that a contingency soil remedy had been added since the Proposed Plan as an option for M&B Site redevelopment. The fact sheet also informed the public that because the banks of the slough had been found to be eroding at some locations, EPA planned to collect samples from the banks of the slough to determine if they needed to be reinforced before the sediment cap was installed.

In May 2000, EPA sent out a fact sheet to update the public on remedial design progress. It informed the public that the sediment cap design had been completed and the bank sampling had been completed. It described the results of the bank sampling, which indicated that the southern shoreline needed to be reinforced before capping the sediment, but that the northern shoreline did not.

An October 2002 fact sheet notified the public that the sediment remedy would be done in two phases, with the first phase beginning that month. It described the activities involved in each phase of work.

EPA sent out a fact sheet in August 2003 to explain that the bank stabilization, Phase I of the sediment remedy, had been completed but that the Phase II work had to be delayed. A new fact sheet will be issued in October 2005 to notify the public that EPA has signed an ESD to document the remedy design changes, and for the relocation settlement with the barge owner in order to implement the remedy.

An ESD notice will be published in the *Stockton Record* as required by the NCP.

Elizabeth Adams

Elizabeth Adams, Chief
Superfund Site Cleanup Branch
U.S. Environmental Protection Agency, Region 9

September 27, 2005
Date

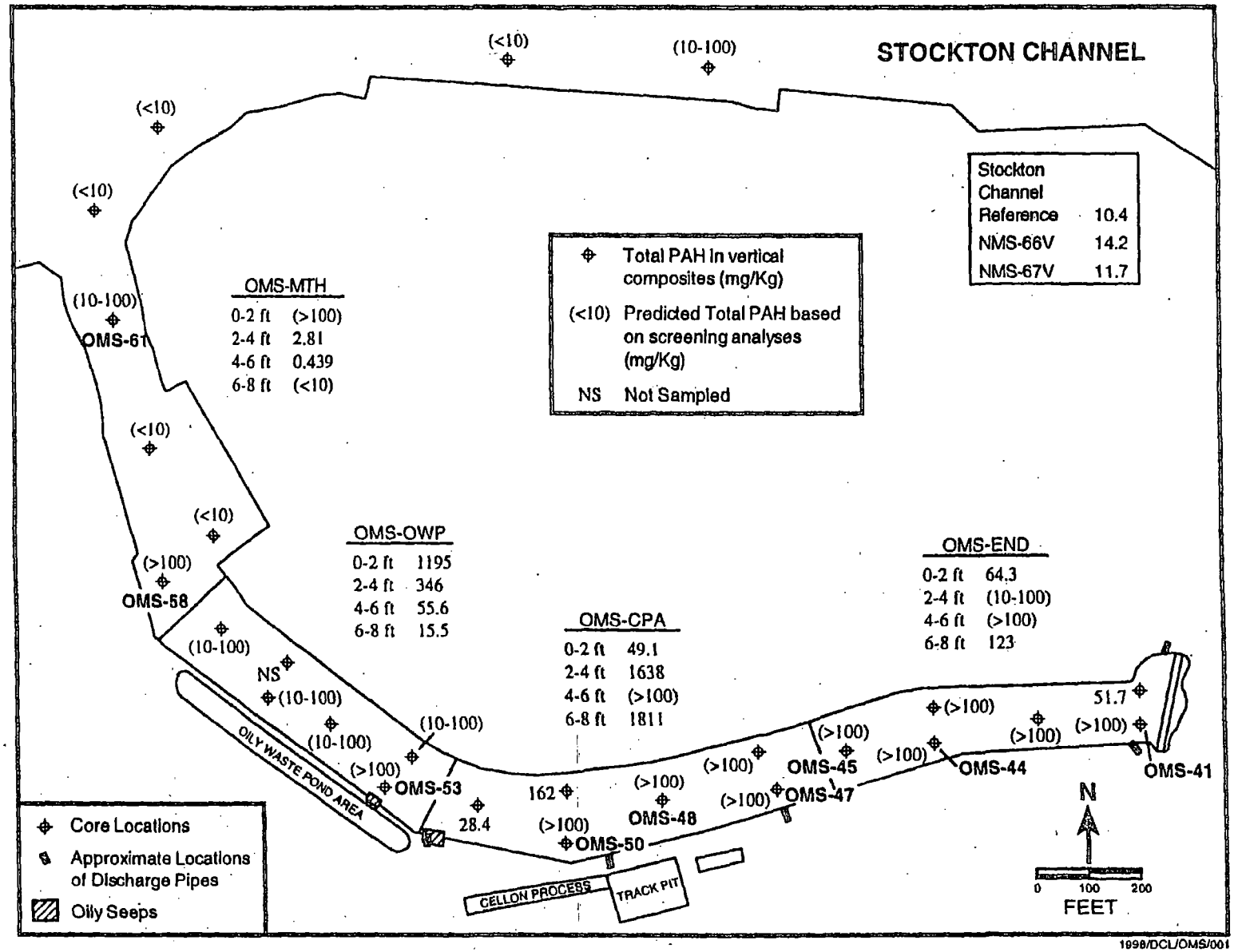


**Figure 5b** PAHs in Sediment Samples from Old Mormon Slough